

Exhibit Conservation Guidelines

Preparation of the Exhibit Conservation Guidelines relied on the current conservation and exhibition literature. The following books, journals and newsletters were considered valuable bibliographic resources and may serve readers interested in further reading on the subject.

1. Books and On-line Electronic Resources

A. GENERAL GUIDELINES FOR COLLECTION CARE AND ENVIRONMENTAL CONTROL

CCI Notes. Canadian Conservation Institute, Canadian Heritage. Available from Canadian Conservation Institute, 1030 Innes Road, Ottawa, Ontario, K1A 0M5, Canada

General information for museum personnel involved in collection care. Contains general guidelines, information on environmental monitoring, lighting, integrated pest management; care of collection by artifact material type, disaster planning, spot tests, cleaning of cases. Binder format for easy reference.

Conservation Concerns: A Guide for Collectors and Curators. Bachmann, Konstanze, editor. Washington, D.C. 1992. Available from the Smithsonian Institution Press.

An up-to-date summary of collections care information. Covers general issues (such as emergency planning, temperature and humidity control) and information on care of specific material. There is also a chapter discussing the choice of construction materials.

Conservation Environment Guidelines for Libraries and Archives. Lull, Williams P. The New York State Program for the Conservation and Preservation of Library Research Materials. 1990. Available as part of Environmental Controls Resource Packet. The University of the State of New York. State Education Department, New York State Library. Division of Library Development. Albany, NY 12230.

An excellent guide which explains why environmental conditions matter and gives practical advice for maintaining appropriate levels of humidity, temperature and light. Also includes information on the design process. Written for library collections, some specific recommendations may need to be modified for other collections.

Conservation OnLine "CoOL": Resources for the Conservation Professional. Electronic website developed and maintained by the Preservation Department of Stanford University Library. <http://palimpsest.stanford.edu/>

The primary site where information from the conservation field can be readily searched and obtained. As an electronic resource it offers the reader access to current trends and a very wide variety of links to other conservation resources.



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Environmental Conditions for Exhibiting Library and Archival Materials. NCANSI/NISO Z39.79-199X. NISO Press Fulfillment, P.O. Box 338, Oxon Hill, MD 20750-0338.

These are the latest standards for displaying library materials.

A Guide to Environmental Protection of Collections. Applebaum, Barbara. 1992. Available from AIC, 1400 16th Street NW, Suite 340, Washington, DC, 20036.

Excellent resource for the exhibition and preservation of a wide range of collection materials. In addition to specific guidance by material type, the book covers general topics of preventive conservation.

A Guide to the Storage, Exhibition and Handling of Antiquities, Ethnographia and Pictorial Art. British Museum Occasional Paper No. 66 . Bradley, Susan, editor. London 1990. Available from the British Museum, Department of Conservation.

Overall summaries of artifact material types, preservation needs and damages caused by poor handling procedures, storage and display conditions. Also addresses environment and provides examples of humidity monitoring and HVAC equipment, however there is no table of contents. Written by various conservation specialists at the British Museum for staff.

An Introduction to the Physics of the Museum Environment. Padfield, Tim. 1998. Available "on line" at <http://www.natmus.min.dk/cons/tp/index.htm>.

An electronic publication in progress, intended to serve as a tutorial on museum climate. Includes realistic and practical advice and the author offers to answer questions submitted by readers.

Manual of Curatorship. Editor. Thompson, John M.A. London: Butterworths Heinemann Press 1992.

A very thorough overview of curatorial and conservation concerns, particularly useful for the small museum and historic house museum. Written by various experts and includes a range of practical methods.

The Museum Environment. Thomson, Garry. 2nd ed. London: Butterworth Publishers, 1986.

Standard reference used to gain understanding of museum environment. Light, humidity and air pollution are discussed. Some information not up-to-date regarding relative humidity criteria for collections. Useful technical guide to climate control using HVAC and microclimate approaches.

National Park Service Museum Handbook, Part I Museum Collections. Revised September 1990
Check with National Park Service for availability at: Area Code (202)-343-8138)

Designed for NPS personnel, but with wider application. Provides introduction to NPS museums, collections and collection management, object preservation, environment, pest management, packing and shipping, storage, treatment, security and fire protection, emergency planning. Binder format divided into sections for easy reference.



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Pollutants in the Museum Environment. Hatchfield, Pamela. London: Archetype Books, 1999.

An thorough guide to the dangers for organic and inorganic based museum collections from environmental contaminants. Both physical and chemical pollutants are included and exhibit case construction is discussed in technical detail.

Storage of Natural History Collections. Volume 1, A Preventive Conservation Approach. Rose, C., Hawks, C.A. and Genoways, H.H., editors. Iowa: Society for the Preservation of Natural History Collections. 1995

Provides very practical information on causes of deterioration, preventive care for collections, various appropriate storage and display approaches, macro and microenvironments (creation, monitoring and maintenance), selection and testing of materials, facilities management and architectural design considerations.

B. EXHIBITIONS

Coatings for Display and Storage in Museums. Tetreault, Jean. Canadian Conservation Institute, Ottawa Canada. 1999.

A thorough review of the dangers and safeguards of using coatings in close proximity to museum objects.

Conservation and Exhibitions: Packing, Transport, Storage and Environmental Considerations. Stollow, Nathan. London: Butterworths & Co. Ltd. 1987.

An excellent source for information on many aspects of exhibit conservation, including objects in transit, on loan and travelling exhibits. Contains many informative photos and diagrams. Sets out basic conservation principles on environment, examination reporting, handling, storage, packing techniques, case design, travelling cases, transportation modes and loan agreements.

Exhibits: Planning and Design. Klein, Larry. New York: Madison Square Press, 1986.

Overview of exhibition planning and design process; includes useful charts and examples from a variety of museums.

Formaldehyde: How Great Is the Danger to Museum Collections? Hatchfield, Pamela, and Jane Carpenter. Cambridge Mass.: Center for Conservation and Technical Studies, Harvard University Art Museum, 1987.

A thorough review and research into the effect of formaldehyde on various collections. Includes a look at the emission sources and an extensive bibliography.

On Display: A Design Grammar for Museum Exhibition. Hall, Margaret. London: Lund Humphries. 1987.

Begins with a brief history of exhibitions. Following chapters discuss steps in designing. Second half provides conservation information on display methods, lighting issues and environmental needs, organized according to types of objects.



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Mount-making for Museum Objects. Barclay, Andre Bergeron, Carole Dignard. Canadian Conservation Institute, Ottawa Canada. 1998

Examines the elements to consider when creating a mount and the base materials and padding available. It includes many illustrations and examples of mounts.

Museum Exhibition: Theory and Practice. Dean, David. New York: Routledge. 1994.

A general reference text on current exhibition development that includes conservation information.

C. CLIMATE

Energy Conservation and Climate Control in Museums. Ayres, J.M., Haiad, J.C., and Lau, H. Marina del Rey, California: Getty Conservation Institute Program Report. November, 1988.

Contains a literature survey covering museum environment (many articles on RH buffers in cases), and building design with emphasis on HVAC systems. Good for use as guide to further reading. Two museums are selected for more in-depth study and computer simulation experiments. Minor information on the construction process is offered.

Local Climatological Data: Annual Summary with Comparative Data. Available for most cities from National Climatic Data Center, Federal Building, Ashville, NC 28001.

Useful in understanding local weather patterns so that an environmental control strategy suitable to the local climate can be planned. Should be obtained yearly, reviewed and keep on file for reference.

National Air Quality and Emissions Trends Report. United States Environmental Protection Agency. Copy available by calling (919)541-5558 or contacting <http://www.epa.gov/oar/aqtrnd/97>.

Tracks air quality for major metropolitan areas providing data on levels of nitrogen dioxide, ozone, particular matter, sulfur dioxide and other airborne pollutants.

D. CONSERVATION CONFERENCE PUBLICATIONS

(The following books [preprints and postprints] from conservation conferences contain relevant papers in each publication; other conservation organization conference papers may also provide beneficial information. A few examples are listed at the bottom of this section.)

Conservationally Correct: Realities and Innovations for Exhibitions – 21st Annual IIC-CG Conference 1995. Calgary, Alberta: IIC-CG. 1995. Available from: IIC-CG, P.O. Box 9195, Ottawa, Ontario, K1G 3T9

Focuses on solutions for preservation issues related to exhibits. Many of the presentations are only published as abstracts. Of five complete articles, three are on safe display, storage and transportation materials, one on fiber optics and one on security measures. They are easy to read, informative and practical.



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Objects Specialty Group Postprints 1991 Volume 1, Albuquerque, New Mexico. Hatchfield, Pamela, editor. Washington: American Institute for Conservation of Historic and Artistic Works, Objects Specialty Group. 1992.
Focuses on exhibit conservation. Numerous papers presented include volatile organic compounds found in display materials, monitors for pollution detection, sealed display cases and active and passive environmental control systems.

Preventive Conservation: Practice, Theory and Research. Preprints of the Contributions to the Ottawa Congress, 12-16 September, 1994. Roy, A., and Smith, P., editors. London: Institute for Conservation of Historic and Artistic Works. 1994.

Excellent resource containing numerous articles on preventive conservation, pollution monitoring and environmental control of historic and museum quality buildings, as well as at the level of the exhibit case.

Exhibition and Conservation. Pre-prints of the Conference held at The Royal College of Physicians Edinburgh 21st-22nd April, 1994. Scottish Society for Conservation & Restoration, The. Available from Scottish Society for Conservation and Restoration, The Glasite Meeting House, 33 Barony Street, Edinburgh, Scotland. ISBN 0950 8068 70
Informative papers presented by various people involved in development of exhibits (illustrating some of the interplay therein), exhibit case design and renovation of a museum.

Fabric of an Exhibition: Interdisciplinary Approach - Preprints of a Conference Textile Symposium. von Baeyer, E., Leclerc, L. and Georgiev, S., Editors Ottawa, Canada: Canadian Conservation Institute. 1997.

Recognizing the cooperative role they play with designers and curators, participants' presentations cover a wide range of topics from contemporary exhibits to long-term displays, exhibition environments, historic houses, travelling exhibits, support and presentation, and expanding professional roles as well as some practical demonstrations/posters for display solutions.

Preprints from all Triennial meetings. ICOM Committee for Conservation: Working Group 17, Lighting and Climate Control. Available from: 1. ICCROM, Via de San Michele 13, 00153 Rome, Italy; Allen Press, Inc., 1041 New Hampshire Street, P.O. Box 368, Lawrence, Kansas 66044; James & James (Science Publishers) Ltd., 5 Castle Road, London, NW1 8PR, United Kingdom

All ICOM triennial meeting preprints have a section on lighting and climate control as well as a section on care of art in transit. They may also contain relevant papers under other sections which are grouped according to specialized areas such as: scientific examination of works of art, painting, ethnographic materials, sculpture, modern art, stone, etc. Papers are written by experts in the field.

Preprints from all annual IIC meetings. The International Institute for Conservation of Historic and Artistic Works. Available from IIC, 6 Buckingham Street, London, WC2N 6BA, UK. e-mail via Internet: iicon@compuserve.com.

All IIC meeting preprints contain relevant papers under sections which are grouped according to specialized areas such as: scientific examination of works of art, ethnographic materials, etc. Papers are written by experts in the field.

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Examples: The following are a few examples of papers which are presented in the above publications.

Blackshaw, S.M. and V.D. Daniels. "Selecting Safe Materials for Use in the Display and Storage of Antiques." Preprints of the International Council of Museums' Committee for Conservation Triennial Meeting, Zagreb, Yugoslavia, 1978.

Hopwood, W.R. "Choosing Materials for Prolonged Proximity to Museum Objects." In Preprints of the American Institute for Conservation of Historic and Artistic Works Annual Meeting, Toronto, 1979.

Michalski, Stefan. "Relative Humidity: A Discussion of Correct/Incorrect Values." In Preprints of the ICOM-CC, Lighting and Climate Group, 1993.

Weintraub, Steven. "A New Silica Gel and Recommendations." In Preprints of the American Institute for Conservation of Historic and Artistic Works, Milwaukee, 1982.

Weintraub, Steven. "A New Design for a Low Maintenance Silica Gel System for the Control of Relative Humidity in a Sealed Case." Preprints of the IIC Congress, September 1980, Vienna, pp. 55-56.

Oddy, W.A. "The Corrosion of Metals on Display." In Conservation in Archaeology and the Applied Arts, Preprints of the International Institute for Conservation of Historic and Artistic Works Conference, Stockholm, 1975.

2. Conservation Journals, Newsletters, and Bulletins

(The following journals, newsletters and technical bulletins contain papers on exhibit materials, design and the environment. A few examples are listed at the bottom of this section.)

Journal of the American Institute for Conservation: Available from the American Institute for the Conservation of Historic and Artistic Works, 1717 K Street N.W., Suite 301, Washington D.C. 20006; Phone: 202-54209545; fax: 202-452-9328 ISSN0197-1360

Canadian Conservation Institute Technical Bulletin: Available from the Canadian Conservation Institute, 1030 Innes Road, Ottawa, Ontario, K1A 0M5, Canada.

Museum News: Published bimonthly by the American Association of Museums, 1575 Eye St. N.W., Suite 400, Washington, D.C. 20005; (202) 289-1818; FAX (202) 289-6578.

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Studies in Conservation: Journal published quarterly by The International Institute for Conservation of Historic and Artistic Works. Available from IIC, 6 Buckingham Street, London, WC2N 6BA, UK. e-mail via Internet: iicon@compuserve.com

WAAC (Western Association for Art Conservation) Newsletter: Published 3 times a year. Copies may be obtained from Susana C. Zubiate, 621 Riverview Drive, Capitola, CA 95010, 408/479-8272, also online information at the WAAC Website at <http://palimpsest.stanford.edu/waac/>

Technology & Conservation of Art, Architecture & Antiquities: For Magazine Analysis/ Preservation/ Restoration/ Protection/ Documentation; published quarterly. It can be obtained from The Technology Organization, Inc., 76 Highland Avenue, Somerville, MA 02143

Museum Practice - Display. Editor David Martin. Volume 1, Issue 2. July 1996. Available from the Museums Association, 42 Clerkenwell Close, London EC1R 0PA

The Exhibitionist. Magazine editor Jay Rounds, National Association of Museum Exhibitors, American Association of Museums. Available from ms. Whitney Watson. c/o Missouri Historical Society, P.O. Box 11940, St. Louis, Miss, 63112. Biannual publication that contains a technical note in each publication.

Examples: The following are a few examples of papers which are presented in the above publications.

Brimblecome, Peter, and Brian Ramer. "Museum Display Cases and the Exchange of Water Vapour." *Studies in Conservation* 28 (1983): 179-88.

Cassar, May and Peter Osborne. "Showcases Checklist for Specifiers." *Museum Practice* Vol. 1, Issue 2 (1996): 54-57

Lafontaine, Raymond H. "Silica Gel." *Canadian Conservation Institute Technical Bulletin* 10 (1984).

Miles, Catherine E. "Wood Coatings for Display and Storage Cases." *Studies in Conservation* 31 (1986): 114-24

Thomson, Gary. "Stabilization of Relative Humidity in Exhibition Cases: Hygrometric Half-time." *Studies in Conservation* 22 (1977): 85-102.